

AUSTRIAN INFORMATION

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RAAB TO VISIT U.S. IN MAY

Austrian Chancellor Julius Raab will arrive in New York May 17 for a short visit to this country. During his stay in Washington (May 18 - 21) he will have lunch with President Eisenhower. The Chancellor will also have talks with Secretary of State John Foster Dulles and other political leaders. From Washington Mr. Raab will proceed to Notre Dame, Indiana, where he will receive an honorary doctor's degree from Notre Dame University.

The Chancellor is following President Eisenhower's invitation, extended to him some time ago by U.S. Chargé d'Affaires Wainhouse in Vienna.

OEEC-CHIEF IN VIENNA

The chairman of the OEEC-intergovernmental preparatory body for the creation of a free trade zone, Sir Reginald Maudlin, conferred in Vienna with Government representatives on matters concerning Austria's relationship to the European common market. Following these conversations, Sir Reginald emphasized that he found "great similarity of views" between British and Austrian governments on fundamental problems. According to Sir Reginald, the removal of customs barriers in the free trade zone, as far as timing and extent are concerned, must coincide with the enactment of these same measures within the European Economic Community of the Six; this would require agreement on the free trade zone treaty to be achieved before the end of July.

AUSTRIA CONFIRMS LEAD IN SKIING

The World Skiing Championship (FIS) was run at the international wintersport center and spa, Badgastein, from February 2 to February 9, 1958. The event was witnessed on weekdays by some 40,000 spectators and by more than 50,000 on weekends. Skiing champions from among 24 nations participated in the competition. The results confirmed once again the outcome of the Olympic Winter Games in 1956 at Cortina d'Ampezzo, Italy; at Badgastein, Austria won 4 first prizes and 4 second prizes out of a total of 8 awards for Slalom, Giant Slalom, Straight Run and the Alpine Combination for men and women:

Men's Slalom: 1. Josl Rieder, 2. Toni Sailer

Men's Giant Slalom: 1. Toni Sailer, 2. Josl Rieder

Men's Straight Run: 1. Toni Sailer

Men's Alpine Combination: 1. Toni Sailer, 2. Josl Rieder

Women's Slalom: 2. Josefine (Putzi) Frandl

Women's Alpine Combination: 3. Josefine (Putzi) Frandl

(Continued on page 2)

AUSTRIA'S PARTICIPATION IN THE INTERNATIONAL GEOPHYSICAL YEAR (Feature on page 6)



Above: The Sonnblick Observatory (9,000 feet) in winter.

FISSIONABLE MATERIAL FOR ATOMIC ENERGY AGENCY

By the end of January 1958, a number of offers were received by the International Atomic Energy Agency in connection with the planned atomic energy programs. Fissionable materials, isotopes and special materials for reactors, as well as scholarships and study facilities have been offered by the United States, Canada, Ceylon, India, Norway, Portugal, the Union of South Africa, the Soviet Union, and the United Kingdom. Fissionable materials, however, will remain in possession of countries of origin for the time being. Only after conclusion of agreements between the international authority and the interested member countries will these materials be delivered.

MAYOR OF VIENNA ON VISIT HERE

Mayor Franz Jonas of Vienna arrived for a week's visit to New York and Washington on February 14. He conferred with Mayor Robert F. Wagner and city officials both in New York and in the Capital.

THE WORLD BANK LOAN TO AUSTRIA

The World Bank loan of about 12 million dollars (312 million Austrian schillings) recently granted to the Austrian industry, will benefit 12 enterprises, notably in the form of 12 subcontracts between the "Investitionskredit-AG" (Investment Credit Corporation), the direct recipient of the loan, and the firms whose applications were accepted. The final decisions, based on the mission's reports upon its return to Washington this weekend, are expected after short final negotiations.

The rate of interest will be definitely set only at the time of signing of the loan agreement. This was announced by members of the World Bank Mission at a press conference arranged in Vienna by the Austrian League for the United Nations. At the moment the prevailing rate of interest of the World Bank is 5 and 5/8 percent. This, however, depends on conditions in the money market in New York and may change due to the recent decrease in the interest rates of the Federal Reserve System. The individual firms will have to pay to the Investment Credit Corporation an interest of 7%. The duration of the loans varies for the individual firms from eight to ten years.

Five previous loans granted to Austria by the World Bank in the total amount of 68 million dollars all went for the development of power plants. The present loan is, therefore, considered as a starting point of a new relationship between Austria and the World Bank.

The amounts of the loans to individual firms vary from 2 to 5 million dollars. Nearly half the loans will be granted to the paper and cellulose industry, the remainder will go to the chemical and textile industry in addition to some other industries.

60,000 MORE JOBS

According to figures released by the central office of Social Security Institutions in Austria the number of persons gainfully employed on January 31st, 1958 amounted to 2,118,964, which is 59,052 higher than on January 31st, 1957.

The most stable employment situation prevailed in Vienna.

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Source need not be given

AUSTRIAN TRADE UNIONS IN APPEAL TO YUGOSLAV GOVERNMENT

The Austrian Federation of Trade Unions cabled a protest to the Government of Yugoslavia concerning the sentences imposed on former leading trade unionists. Signed by executive vice president Franz Olah and acting secretary general Fritz Klenner, the cable to Belgrade stated, "in the name of 1.4 million organized workers," that the Austrian trade union movement, too, had known persecution in the past. This, however, had always been the mark of an oppressive, anti-labor regime.

The statement protested against the "imposition of harsh sentences for purely political reasons" and demanded the immediate release of those sentenced.

NEW ASPECTS OF DEMOCRACY EXPLORED; DIRECT POPULAR PARTICIPATION SOUGHT

During the last week of January 1958, the Austrian Parliament approved a bill on referendums.

(The Austrian Constitution of 1929 envisages two ways of popular participation in legislative affairs: a bill drafted by a private person or a group of persons is to be submitted to Parliament by the Federal Government if such action has the backing either of at least 200,000 voters or of half the electorate in each of three Laender.)

However, a new bill had to be prepared to lay down basic regulations for the implementation of referendums on laws already adopted by Parliament. In principle, the referendum is compulsory procedure with regard to legislative measures involving basic amendments of the constitution. A change of the political system of the State, for instance, could not be enacted in Austria merely by act of Parliament.

The implementation of referendums on legislative measures is regulated by the provisions of the electoral law as applicable to general elections. If the referendum affirms the bill by a majority vote, the bill becomes law. However, in case of a referendum rejecting a bill adopted by Parliament, the bill has to be shelved.

Public opinion in Austria attaches great importance to the new bill. The introduction of measures for popular examination and approval of bills adopted by Parliament, as well as of suggesting new laws to the legislature, is widely considered a logical development of the democratic institutions of the country.

POSTAL CHECK CLEARING SYSTEM STARTED IN AUSTRIA 75 YEARS AGO.

The Austrian Postal Savings Bank was founded 75 years ago on the English pattern as a savings institution. In the first year of its existence, the Austrian Postal Savings Bank introduced the Postal Check Clearing System which was later adopted throughout the world. With savings accounts totalling more than one billion schillings and checking accounts three times that much, the bank plays an important role in the Austrian economic picture.

SAVINGS DEPOSITS RISE 28% IN 1957

At the close of 1957, the Austrian National Bank reported an increase in savings deposits from 12.93 billion schillings to 16.56 billion. (One dollar equals 26 schillings - Ed.).

Austria Leads in Skiing (Continued from p. 1)

The classification by nations resulted in the following allotment of points:

Austria	125	U.S.A.	29
Switzerland	94	Italy	27
France	50	Japan	19½
Norway	43	Germany	12
Canada	40½		

Among those attending at Bad Gastein was the director of the Organization Department of the Olympic Winter Games 1960 in Squaw Valley, Prentice Hale, with a staff of American co-workers. Hale said that he expected a daily turnout of up to 30,000 visitors at the Winter Games of 1960.

VIENNA SPRING FAIR EXPECTED TO REFLECT EUROPEAN INTEGRATION

The 1958 Vienna International Spring Fair, March 9-16, will reflect the general progress of European integration. The number of domestic and foreign exhibitors is on the increase. All will strive to meet the challenge of the bigger market. Architectural installations and general facilities on the fair grounds have been expanded and improved. A special attraction will be the International Automobile Show where the latest designs of the world's leading automobile makers will be shown.

AUSTRIAN TRADE FAIRS IN 1958

DORNBIRN (Vorarlberg)	Export and Sample Fair, combined with Textile Trade Fair	August 1 - 10
GRAZ (Styria)	Graz Southeast Fair	April 26 - May 4
	Graz Southeast Fair	Sept. 27 - Oct. 5
INNSBRUCK (Tyrol)	Innsbruck Fair, combined with Trade Fair for Hotel, Restaurant and Tourist Supplies	September 20 - 28
KLAGENFURT (Carinthia)	Kaertner Fair, combined with Lumber Fair	August 7 - 17
WELS (Upper Austria)	Austrian Central Agricultural Fair	Aug. 30 - Sept. 7
VIENNA	International Spring Fair and International Automobile Exhibition	March 9 - 16
	International Autumn Fair	September 7 - 14

THE AUSTRIAN INFORMATION SERVICE
may be able to furnish more detailed information
on any item printed in AUSTRIAN INFORMATION

AUSTRIAN PARTICIPATION IN FOREIGN FAIRS

Austrian products will be exhibited in Frankfurt-on-Main, West Germany (March 2-6), Leipzig, East Germany (March 2-11), Johannesburg, South Africa (March 27 - April 7) and Zagreb, Yugoslavia (April 11-20); later in the season: at Poznan, Poland (June 8-22), Trieste, Italy (June 22-July 6), Izmir, Turkey (August 20-September, 20), again Zagreb, Yugoslavia (September 6-21), and Frankfurt-on-Main, West Germany (September 7-11), at Leipzig, East Germany (September 7-14), Salonica, Greece (September 7-28), and Plovdiv, Bulgaria (September 14-28).

Exhibition of Austrian products is considered for these fairs: Brno, Czechoslovakia (November 22-December 8), Bogota, Colombia (November 22-December 8), Damascus, Syria (September 1-30), and Baghdad, Iraq (October).

Representative exhibits will also be prepared for the Spring Fairs in Milan, Italy (April 12-27), Paris, France (May 10-26), Munich, West Germany (May 15-26), Berlin (September 6-21) and Bolzano, Italy (mid-September).

A special exhibit of Austrian products will be mounted at the Toy Fair in Nuremberg, West Germany (February 23-28).

Austrian information booths will be installed at the Agricultural Fair in Verona, Italy (March 9-17), at the fair in Casablanca, Morocco, and at Goeteborg, Sweden.

HIGHER STEEL PRODUCTION - LESS SCRAP

The production of raw steel in Austria rose in the past year by about 20% compared to 1956, even though the rise in consumption of scrap iron in the same period amounted only to about 15%. This development is attributed to the fact that intensification of production in low-consumption blast furnaces has reduced the ratio of scrap iron to the total of raw steel overall production.

In 1957 about 1.1 million tons of scrap iron were consumed by the Austrian steel and iron works, according to provisional figures, as against 954,000 tons the year before that. These quantities consisted of 220,000 tons imported from abroad (an increase of about 53% over 1956) and 880,000 tons of domestic scrap iron (an increase of 8.7%).

CONSIDERABLE EXPORT OF RAW STEEL

The Austrian steel and iron works have achieved in the past year an increase in production rate, compared to 1956, by far exceeding the increase in other production branches. Thus the increase amounted to: about 12% at 1,950,000 t. in raw iron (pig iron), 20% at about 2,500,000 t. in raw steel and about 16% at 1,600,000 t. on rolled products.

The export of this industry is characterized by the fact that less unprocessed products and more treated products (raw steel and rolled products) were marketed. The export of pig iron decreased from 335,000 t. in 1956 to about 240,000 t. in the past year or about 28%. But at the same time there was an increase in the export of raw steel from 63,000 t. to about 155,000 t. (an increase of 146%) and rolled products from 552,000 to about 730,000 t. (32%).

In the category of rolled products, sheet metal showed an increase from 380,000 t. in 1956 to 510,000 in the past year and other rolled products (bars, ribbons, rails, wire etc.) from 172,000 t. to about 220,000 t.

The investments in rolling plants should result in the current year in a further expansion so that a greater portion of the raw steel which at present is still being exported would be used up for rolled products, thus intensifying the export of goods of a higher value.

UNITED AUSTRIAN STEEL (LINZ) STEPS UP PRODUCTION

The United Austrian Iron and Steel Works (VOEST), Linz, reports a substantial increase in output over last year. Annual production figures for 1957 were 1.85 million tons of coke (against 1.7 million tons in 1956), 1.32 million tons of pig iron (against 1.2 million tons), 1.17 million tons of crude steel (as compared with 0.88 million tons in the preceding year), and 730,000 tons of rolled materials.

NEW SLAG RESIN INSULATING MATERIAL OFFERED

Other reports from VOEST show that the plant's production program now includes a new insulating material, "Phonotherm." In the new process, a fibre of the wool-structure type derived from liquid slag is coated with a thermoplastic resin film when leaving the spinnerette and is condensed into an endless felt-fleece belt. Thus, "Phonotherm" is a development of plain slag-wool fibre. It can be used for all insulating purposes, for sound-proofing buildings, for insulating functions in heating equipment, for refrigerators and boiler plants.

ALPINE-MONTAN STEEL INTRODUCES EUROPEAN STANDARDS

The new standard laid down by the West European steel manufacturers for a number of structural sections has been adopted by the Austrian Alpine-Montan Steel Corporation, the first outfit to do so. The new standard was laid down for structural sections to insure a substantial reduction in weight. The A-M Corporation has already begun to produce the new lightweight sections. During the year, the corporation expects to follow up with two other types under the new standard.

ALPINE-MONTAN LD-STEEL APPROVED FOR SHIPBUILDING BY LLOYDS

As a result of recent material and production tests, steel produced by the Austrian Alpine-Montan Corporation by oxygen-converter process developed in Linz and Donawitz has been approved for entry into Lloyd's international register as suitable for shipbuilding. The certification by Lloyd's, the standard testing institute for seagoing vessels, has again confirmed the outstanding properties of oxygen-converter steel and enhanced its prospects on international markets.

AUSTRIAN SILKS IN FOREIGN MARKETS

The Austrian silk industry, in which some 3200 workers are employed in 28 plants, will have exceeded in the current year the 1956 annual production rate of 21 million meters.

The number of working looms has risen to about 2650, of which 550 are automatic. The production of fabrics from synthetic yarns has increased considerably in the past year. Many products and specialties of the Austrian silk industry are distinguished by a particularly tasteful execution (tie fabrics, upholstery and decorative fabrics, brocades and high fashion dress fabrics). This was the reason for a 10% increase in the export of these goods to some 40 countries in the past year. Whereas the value of exported silk fabrics in 1956 amounted to about \$730,000, the estimated value of exports in 1957 is about \$800,000.

As the import of almost all silk products is fully liberalized, the local producers face a massive competition from abroad which is exerting a very strong import pressure on the small but attractive Austrian market.

SMOKES UP 4%

The Austria Tobacco Company (Formerly "Oesterreichische Tabakregie") sold in 1957 about 4.1% more tobacco products than in 1956. Cigaret sales reached 8,349 billions (against 7.8 billions in 1956), which is a new record.

The sale of cigars rose from 89 millions in 1956 to 94.3 million pieces in 1957.

According to figures of the Central Office of Statistics, the import of tobacco in 1957 amounted to 12,000 tons valued at about 11 million dollars. (This is a slight decline from 1956, when 14,300 tons valued at about 13 million dollars were imported.) About 65% of all the raw tobacco imported came from the following five countries: U.S.A., Turkey, Greece, Brazil and Rhodesia.

AUSTRIAN TV SETS SELL FOR LESS

A leading Austrian firm has produced a new TV set which will, despite numerous improvements, sell for about \$40.00 less than the similar sets with the same size picture tube. The price will be reduced from about \$280.00 to roughly \$240.00. This reduction in price was made possible by increased production as well as by improved production methods (As reported previously, production has almost doubled in 1957 as compared to 1956; altogether there are some 28,000 sets in use in Austria now as against 7,000 at the beginning of the previous year.) With the growing demand for TV sets expected to continue, manufacturers - there are five of them in Austria - should be able to convert to mass production.

A MILLION RECORDS

Over a million records were sold in Austria for the first time in the past year. This is an increase of 15 to 20% compared to 1956. About two thirds of all records sold were light music and jazz, one third were serious music and recordings of great performers. Most of these records have to be imported from abroad.

CALLING "EXPLORER"

The postal testing station of Klagenfurt succeeded in getting the radio-signals of the American earth satellite on tape. As a result, a special service for transmission by phone has been initiated: in the Carinthian towns of Klagenfurt, Villach, Spittal and Wolfsberg these signals can be obtained by simply dialing the number 17. Elsewhere in Austria the number 17 is preceded by the letters of the local exchange (long distance connections being automatic).

CULTURE AND SCIENCE

SCHOOLS, THEATERS GET AUSTRIAN FISCAL BOOST

In comparison with entries for 1957, the 1958 Bill of Finance envisages an increase of appropriations for cultural purposes of 345.021 million schillings to make a total amount of 2,583,829 million. (1 dollar equals 26 schillings; Ed.) In detail, the allocations to universities and scientific projects have been enlarged by 66.2 million to 391.1 million schillings, while the funds to be appropriated for schools have been increased by 235.0 million to make a total of 1,980.7 million schillings. Also, appropriations for museums, especially for the seven Federal Museums in Vienna, have been raised by an amount of 3.4 million to reach 21.4 million schillings, which are to be shared in part with other non-Federal institutions of this sector.

The allocations to the Federal Theatres, including the Vienna State Opera, the Vienna Volksoper and the Burgtheater, have remained on approximately the same level as last year. Estimated expenditures total 180.115 million schillings as against 183.392 million in 1957, while estimated receipts have been entered with 52.317 million as against 49.025 million in the preceding year. In the budgetary analysis it is expected, therefore, that it will be possible to reduce the 134.367 million deficit of 1957 by 6.569 million, making a total of 127.798 million schillings in 1958.

CHAMBER OF LABOR REPORTS SUBSTANTIAL OUTLAY

The Austrian Chamber of Labor reports that about one fifth of the total budget for 1958, or about 340,000 Dollars, will be spent for cultural and educational purposes. (The planning of leisure and popular education are among the functions of the Chamber.)

There are, for example, the performances of the Vienna Kammeroper in outlying districts, as well as similar ventures launched under the slogan of "Theater in the Suburbs."

Suburban performances of the Vienna Volkstheater began in 1954 and have since been given every year from October till May in 17 different locations.

In those four years a total of 559 performances were offered in working class suburbs; they attracted an audience of 248,000. This experiment has exceeded all expectations, for in most cases the demand for tickets cannot be fully satisfied.

MITROPOULOS TO CONDUCT AT VIENNA OPERA

As its first offering in the fall, the Vienna State Opera will present Verdi's "Masked Ball". The performance will be conducted by Dimitri Mitropoulos, who will also conduct some repertory performances. Costumes and settings will be sketched by Ita Maximowa. In the main roles: Birgit Nilsson, Jean Madeira, Di Stefano and Bastianini.

Earlier, in April, Perbert Karajan will conduct a newly staged version of "Tosca", to be sung in Italian. The title role will be sung by Renata Tebaldi, Cavaradossi by Di Stefano and Scarpia by Tito Gobbi.

PREMIERE WITH LEONID MASSINE

The Staatsoper, as previously announced, will stage in mid March the premiere of the season's second new ballet. The program of this presentation has undergone a change, however, because Theodor Berger did not complete the commissioned musical composition; therefore, an older work by Berger, the "Homeric Symphony," will be performed in ballet form.

Attention is centered on the new interpretation of Stravinsky's "Petruschka" by Leonide Massine. To complete the evening's program, a Pas de Trois from the Paquita ballet by Minkus will be staged by Giorgia Hiden, who bases her concept on the choreography of George Balanchine.

KARAJAN CONDUCTS AT THE HOFBURG CHAPEL

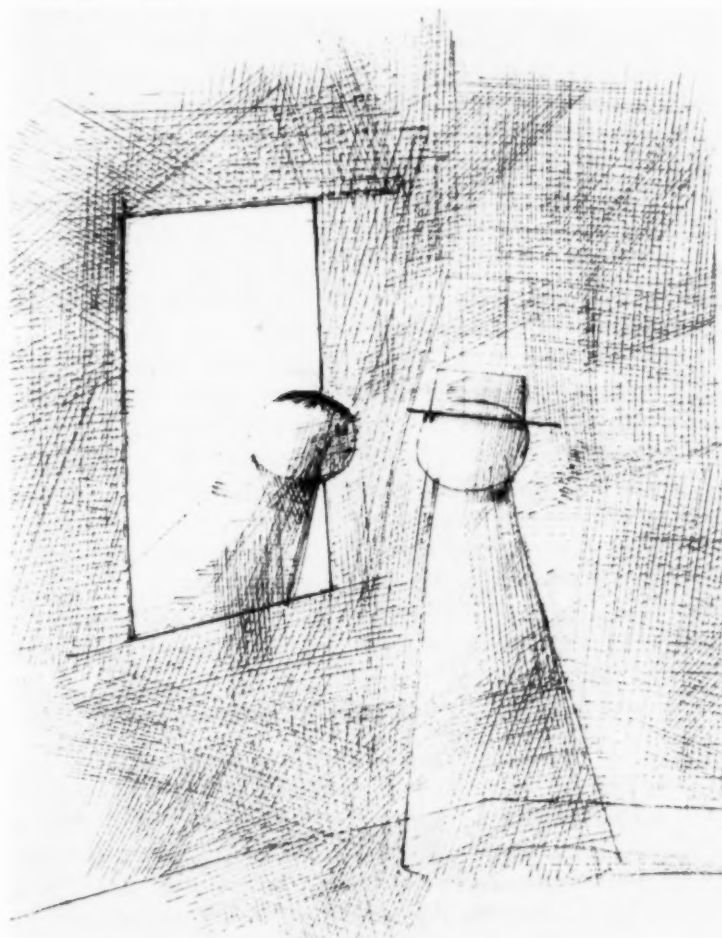
During Sunday Service at the Vienna Hofburg Chapel, Herbert Karajan will conduct the "Coronation Mass" by Mozart; later he will take the same group to Brussels, where he will perform this work at the World Exhibition. (Traditionally, the performances of the Hofmusikkapelle, which usually combines the Vienna Boys' Choir, the State Opera and members of the Vienna Philharmonic, are directed by the head of the Opera.)

INTERNATIONAL MOTION PICTURE SCIENCE WEEK TO BE HELD IN VIENNA

From May 28 to June 3, 1958, Vienna will be the scene of the Third International Motion Picture Science Week. The affair will be organized by the Austrian Society for Motion Picture Science.

PAUL FLORA EXHIBIT

The Este Gallery at 32 East 65th Street, New York, will exhibit etchings by Paul Flora, March 7-26. This will be the first showing of the 35 year old artist from Innsbruck, Tyrol, outside of Europe (where he is well-known for his drawings and his books.)



Paul Flora: Dialogue

BURGTHEATER PLANS GRILLPARZER CYCLE FOR 1958 VIENNA FESTIVAL

As one of the highlights of the forthcoming Vienna Festival (May 31 to June 22), the Vienna Burgtheater plans a serial presentation of Franz Grillparzer's dramatic work. The cycle will include "King Ottocar, His Rise and Fall," "A Faithful Servant of his Master," "Sappho," "Medea," "Hero and Leander," "Dream as Life," and "Thou Shalt not Lie."

U.S. PARTICIPATION IN SALZBURG UNIVERSITY WEEKS

The Chicago Institute of European Studies will conduct a two months' trip to Europe starting around the end of June. Provisions have been made for attendance of the Salzburg University Weeks from August 3 to 16. (Total cost for the trip: 780 dollars; inquiries should be directed to the Institute of European Studies, 35 East Wacker Drive, Chicago 1, Ill.)

FOR THE SECOND (AND LAST) TIME: VIENNA "DEUTSCHMEISTER" IN NEW YORK

The Felix G. Gerstman Management announced that a second concert by the "Deutschmeister" has been arranged for Monday, April 28, 8:30 P.M. at Carnegie Hall. The band will embark on its return trip to Austria on the following day.

880,000 ATTEND VIENNA MUSEUMS IN 1957

Attendance records for Vienna's Museums were set in 1957 by a total of 877,981 visitors. The institutions covered by this report include the Museum of Fine Arts, the Armory, the Collection of Ancient Musical Instruments, the Museum of

Austrian Cultural Monuments, the Collection of State Coaches, the Imperial Treasure, the Museum of Natural History, the Museum of Ethnology, the Albertina Collection of Graphics, the Austrian Gallery of Modern Art and the Austrian Museum of Applied Arts.

AUSTRIA'S PARTICIPATION IN THE INTERNATIONAL GEOPHYSICAL YEAR

The participation of Austria in the International Geophysical Year is in keeping with the country's past tradition. This up to now greatest of research undertakings had two precursors: "The International Polar Years" of 1882-83 and 1932-33. The stimulus for the first International Polar Year was given by the Austrian naval officer and polar explorer, Karl Weyprecht. On the basis of his experience with the Austrian polar expedition, he had felt the need of investigating the polar regions with the aid of permanent research sites instead of voyages of discovery.

In the first International Polar Year, Austria sent an expedition to the island of Jan Mayen, which wintered there and which mainly instituted geomagnetic observations. During the second International Polar Year of 1932-33, Austria again stationed an expedition on the island of Jan Mayen. In addition to magnetic recordings, there were also observations of radiations and other meteorological and geophysical investigations. In the present International Geophysical Year, the various participating states have been assigned such extensive research tasks in their native regions that Austria decided to concentrate its research in the native country proper and to desist from an Austrian expedition.

An Austrian in "Little America"

However, Austria was able to send two specialists, particularly trained in the realm of physical investigation of glaciers, to participate in the American Arctic and Antarctic expeditions: Dr. Herfried Hoinkes, professor of Meteorology and Geophysics at the University of Innsbruck, who is carrying out a research program on glaciers in Little America in the Antarctic. Dr. Norbert Untersteiner, science assistant at the Vienna Central Institute for Meteorology and Geodynamics, is making investigations regarding the ice in the polar sea on a research station set up in the Arctic Ocean, drifting with the ice. The station was floated at 80° N and 159° W to the northwest of Alaska at the outset of the geophysical year and is now drifting with the ice towards the North Pole.

Countrywide Participation

The following organizations in Austria proper are participating in the work of the International Geophysical Year:

Central Institute for Meteorology and Geodynamics in Vienna: general meteorological observations; radio sound phenomena and radar-high wind observations; radiation recordings of all sorts; geomagnetic and seismic recordings; observations of the radioactivity of the air; chemical investigations of the air and precipitations; recording of the ozone content of the air layer close to the ground and recordings of atmospheric electricity.

Institute for Meteorology and Geophysics at the University of Innsbruck: investigations of the glaciers in the Oetztaier Alps.



Observatory for Cosmic Ray Research on the Hafelekär

Hafelekär Observatory (7000 feet) of the Physics Institute at the University of Innsbruck: observations and recordings of cosmic rays.

Institute for Meteorology and Geophysics of the University of Graz: observations and recordings of the ionosphere.

Sonnblick Observatory on the Hohe Tauern (some 9000 feet): recordings of the various radiation components.

Sun Observatory on the Kanzelhoehe, Gerlitz, Carinthia: inspection of solar activity.

Astral Observatory of the University of Innsbruck: latitude observations as well as several stations with general meteorological observations and recordings of the radiation of the sun and sky.

The Sonnblick Observatory (some 9000 feet) is the highest station within the International Geophysical Year fulfilling the complete program of radiation measurements. In order to carry out this task, there was constructed the previous year near the observatory a steel tower about 20 meters high for the purpose of achieving a completely free horizon, making possible the following recordings:

- global radiations
- sun radiations
- irradiations from the earth's surface
- ultra-violet radiations
- strength of global illumination
- sky light

Albedo Measurements

Glacier reflections have considerable influence on the thawing process, as shown in the following pictures of the

Albedo of an alpine glacier (the Hintereisferner, Oetztal, Tyrol) during a period of clear weather. The following are the known phenomena caused by radiation:



*Glacierplate: Protection against radiation by a thick rock.
Kryokonit holes: Intense radiation absorption by thin*



layers of dirt causes intensified thawing and produces holes with vertical rims.

The Sonnblick Observatory belongs to the highest permanent weather stations in the world. It is near the summit of the Sonnblick; it is inaccessible during the winter months and cut off from the outside world. Service throughout the year is in the care of a young weather warden and his wife. 21 additional stations throughout Austria work especially in the radiation measurement program.

Glaciers Subject of Study

In addition to radiation measurements at various heights, Austria has also taken a very keen interest in the study of glaciers. The glacier investigation program by the Institute of Meteorology and Geophysics at the University of Innsbruck comprises studies of the mass and energy in the "Hintereis" glacier and in the "Kesselwandferner" (glacier) in the Oetztaler Alps (7 to 11,000 feet high). In order to detect the ablation and accumulation of snow and ice, a network of 110 gauges was set up and observations

on precipitations and snow transportations were instituted. In order to understand the meteorological factors in the snow and ice masses, measurements and readings were carried out of the various radiation components and radiation balance; measurement of wind, temperature and humidity profiles in the air layer close to the ice; and measurements of the drainage. A permanent meteorological observation station was erected at the hospice of the Hochjoch mountain, equipped with a radio station in the winter time during the period of danger from avalanches.

The transportation of equipment for observation and the erection of summer camps at heights of up to 3700 meters are extremely difficult and make severe demands on the scientists and their auxiliary personnel. The entire material must be carried on the back during many days' marches from the valley up to the camp sites. The question of the radiation balance on the numerous alpine glaciers is of great significance to

Austria, an Alpine country; this has been investigated and pursued there scientifically for many decades. Observation has shown that the surface of the glaciers, when conditioned by pollution and age, has been more influenced by consequent reflection activity on the progressive shrinking of the glaciers than by the weather conditions, whose clemency is usually given as the main reason for such shrinkage of the glaciers. Extreme pollution of the surface hastens the melting process to an unbelievable extent due to the increased ray absorption. For example, concentrated artificially erected pollution spots on the glacier surface will frequently cause vertical holes in the glacier cover, extending for several feet in depth. On the other hand, cliffs on the glacier represent a protection against radiation and thus give rise to the so-

called "glacier tables".

Observation of the Sun

During the International Geophysical Year, a possibly uninterrupted surveillance of the sun's activity is being undertaken from the sun observatory on the Kanzelhoehe in Carinthia (6000 feet). Photospherical phenomena are daily drawn in projection (at periods of sun spot activity in intervals of three to four hours). At least once daily integral pictures of the photosphere, of the start, the strength and the duration of chromospheric eruptions are taken. In addition, daily coronagraphs are made of all protuberances and filament movements as well as of coronal lines. The Kanzelhoehe mountain has an average sunshine of 2,037 hours per year, one of the most prolonged in Europe.

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